

REMARKS

Applicant thanks the Office for the attention accorded the present Application in the March 06, 2006, Office Action. Claims 1-12 are pending in this application. Reconsideration in view of the following remarks is respectfully requested.

Applicant does not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicant reserves the right to pursue the full scope of the subject matter of the claims in a subsequent patent application that claims priority to the instant application.

Claim Rejections

Claims 1-5, and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Moon et al. (USP No. 4,669,004). Claims 6, 7 and 11-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art in view of Moon, and further in view of Official Notice.

Amendments to Specification

Applicant has amended the Specification as noted above to provided a title more descriptive of the claimed invention. It is believed that the foregoing amendments to the Specification overcome the outstanding objections thereto. No "new matter" has been added to the original disclosure by the foregoing amendments to the Specification, as support can be found in page 4, lines 13-14 of the present application.

Drawings

It is noted that the Examiner has accepted the drawings as originally filed with this application.

35 U.S.C. §103(a) rejections based on AAPA and Moon

The Office rejects claim 1 under 35 U.S.C. § 103(a) as being unpatentable over the applicant's admitted prior art (*AAPA*) in view of *Moon*. Applicant traverses the rejection of claim 1 because Applicant submits that the Office has misinterpreted *Moon* and the combination of *AAPA* and *Moon* does not render claim 1 obvious.

In this regard, as shown in its FIG. 14, *Moon* discloses “823 cylinders of user data tracks” for recording user data, and “seven cylinders of system software,” “which includes the media defect map” (col. 22 lines 30 - 33). According to *Moon*, “[e]ach track location is referred to as a ‘cylinder,’” and the depiction of “a single cylinder” can be seen in FIG. 15B (col. 22 lines 33 - 35). As shown in FIG. 15B, two sectors preferably “located at the end of a track” “are initially reserved as spares for factory defect management” for “every cylinder location” (col. 22 lines 36 - 39). “If, during use of the system 10, a hard error is detected in a particular sector, such as the sector labelled ‘bad’ in the track of cylinder n, surface 2 of FIG. 15B, that sector is automatically replaced by the microprocessor 102 with the first available spare sector e.g. a spare sector available at surface 5, cylinder n” (col. 22 lines 40 - 45). After the bad sector is replaced by the spare sector, then “the media defect map is amended accordingly to note this substitution” (col. 22 lines 46 - 47).

Similarly, *Moon* further explains, col. 22, line 63 - col. 23, line 6:

If both spare sectors of a particular cylinder have been previously used up by operation of the media defect management arrangement of the subsystem 10, then the microprocessor 102 commands a search for an available spare sector in the nearest ***cylinder location***. . . . Once a spare sector is located, the next logical block is assigned to the physical address of the spare sector so located, and the defect map is amended accordingly. (Emphasis added).

Based on the teachings of *Moon* above, it can be seen that in *Moon*'s defect management, when a data sector in a cylinder of user data track is determined to be a bad sector, the data would be recorded on one of the two spare sectors in the end of the cylinder track. If both spare sectors of this cylinder have been previously used up, then a search for an available spare sector in the nearby ***cylinder*** is commanded. After a spare sector for recording user data is located, the defect map

is then amended accordingly. In short, *Moon's* search is conducted on the ***spare sectors of the cylinders***. And only ***after*** a spare sector is located then the defect map is amended accordingly. This is in direct contrast to the limitations recited in Applicant's claim.

In this regard, independent claim 1 of the present application recites:

1. A searching and recording method to search a corresponding replacement block for a defect block in an optical recording medium, so as to correctly record digital data onto said optical recording medium, the optical recording medium comprising a plurality of sequentially arranged defect management areas (DMAs), each DMA having a data area (DA) and a spare area (SA), both of said DA and SA comprising a plurality of blocks for recording digital data, each said block being coded with a corresponding address for identification, and said optical recording medium further comprising a defect table, which has a plurality of defect table blocks (DTB), each said DTB corresponding to one of said DMA in said optical record medium and comprising a plurality of predetermined recording entries corresponding one by one to the blocks of said SA, said searching and recording method comprising the following steps:
 - in said optical record medium, when the digital data, which are designated to record on a predetermined block in the DA of a target DMA, are determined to be recorded on another block, inspecting whether ***a target DTB*** corresponding to the target DMA still has an idle recording entry;
 - if there is no idle recording entry in said target DTB, ***searching said DTBs*** adjacent to said target DTB for any said idle ***recording entry*** by sequentially leapfrogging ***around said target DTB*** back and forth; and
 - when said idle recording entry is searched in a replacement ***DTB***, recording the digital data in a replacement block corresponding to said idle recording entry, wherein said replacement block is in the SA corresponding to said replacement DTB. (Emphasis added).

Applicant respectfully asserts that the combination of *AAPA* and *Moon* is legally deficient for the purpose of rendering claim 1 obvious. In particular, Applicant respectfully asserts that *Moon* is incompatible with *AAPA*. The combination of *Moon* and *AAPA* is substantially different from claim 1 and therefore does not render claim 1 obvious.

As recited in claim 1 of the present application, the claimed method conducts search on a target **defect table block (DTB)**, instead of on a spare area (SA) of the defect management area (DMA), to check if there is still an idle **recording entry** therein. When an idle recording entry is searched and found in a replacement **DTB**, the user data is then recorded in a replacement block corresponding to that idle recording entry.

In comparison, the claimed method conducts search on the **defect table blocks (DTB)** of a defect table while *Moon* conducts search on the **spare sectors of the cylinders**. Furthermore, the claimed defect table is used to be searched while *Moon*'s defect map is not used to be searched but merely to keep and amend the record of substitution after the search for a spare sector is done. Moreover, the claimed method conducts search by sequentially leapfrogging **around the target DTB** of a defect table back and forth while *Moon*'s search centers around the particular **cylinder** of the user data tracks. Yet still, the claimed method records the digital data in a replacement block **after** the search on the **DTB** of the defect table is done while *Moon* records the user data in a spare sector of a cylinder **before** the defect map is amended accordingly.

Because of the different search approaches utilized by *Moon*, *Moon*'s teachings cannot reasonably be expected to be compatible with *AAPA* and, even when combined with *AAPA*, cannot render claim 1 of the present application obvious. That is, persons ordinary skill in the art would have been motivated to select the totally different references and combine them together in the expectation that the combination could achieve the claimed function or result.

For at least this reason, claim 1 is patentable over the cited prior art, and the rejection of claim 1 should be withdrawn. Insofar as claim 1 is allowable, claims 2-7, all dependent from claim 1, are also allowable. Claim 8 is directed to a searching and recording system corresponding to the searching and recording method of claim

1 and recites similar limitation. The arguments made in the above to claim 1 apply with equal force to claim 8. It is therefore believed that claim 8 is also patentable over the cited prior art, and the rejection of claim 8 should be withdrawn. Insofar as claim 8 is allowable, claims 9-12, all dependent from claim 8, are also allowable.

Reconsideration of the rejections of claims 1-12 is hereby requested.

As a separate and independent basis for the patentability of claims 1-12, Applicant submits that the Office Action has failed to identify a proper suggestion or motivation to combine the selective teachings of the various references. In combining *Moon* with *AAPA*, the Office Action stated that "[t]he two are analogous art" and the combination would have been obvious because "it would minimize the amount of actuator movement" (Office Action, p. 3-4). This allegation, however, is insufficient to constitute a proper motivation to combine the cited references.

In this regard, it is well-settled law that in order to properly support an obviousness rejection under 35 U.S.C. §103, there must have been some teaching in the prior art to suggest to one skilled in the art that the claimed invention would have been obvious. *W.L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly, *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988),

The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ..." Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure... In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention. (Emphasis added).

In this regard, Applicant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that

the Federal Circuit also requires the prior art to suggest both the combination of elements and the structure resulting from the combination. Stiftung v. Renishaw PLC, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability and combinability of arranging the particular steps to realize an searching and recording method, as claimed by the Applicant.

When an obviousness determination is based on multiple prior art references, there must be a showing of some “teaching, suggestion, or reason” to combine the references. Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997) (also noting that the “absence of such a suggestion to combine is dispositive in an obviousness determination”).

Evidence of a suggestion, teaching, or motivation to combine prior art references may flow, inter alia, from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. See In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be “clear and particular.” Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617.

If there was no motivation or suggestion to combine selective teachings from multiple prior art references, one of ordinary skill in the art would not have viewed the present invention as obvious. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); Gambro Lundia AB, 110 F.3d at 1579, 42 USPQ2d at 1383 (“The absence of such a suggestion to combine is dispositive in an obviousness determination.”).

Significantly, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another reference with the particular prior art reference. Winner Int'l Royalty Corp. v. Wang, No 98-1553 (Fed. Cir. January 27, 2000). Well-established Federal Circuit case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application

of the requirement for a showing of the teaching or motivation to combine prior art references. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Evidence of teaching or suggestion is "essential" to avoid hindsight. *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988). A description of the particular "teaching or suggestion or motivation [to combine]" is an "essential evidentiary component of an obviousness holding." *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352 (Fed.Cir.1998). Indeed, in forming an obviousness type rejection, "the [Examiner] must identify specifically ... the reasons one of ordinary skill in the art would have been motivated to select the references and combine them." *In re Rouffet*, 149 F.3d 1350, 1359 (Fed. Cir. 1998). The Examiner can satisfy this burden of establishing obviousness in light of combination "only by showing some objective teaching [leading to the combination]." *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992).

Summary


Applicant respectfully submits that the arguments presented herein successfully traverse the 35 U.S.C. §103 (a) rejections of claims 1-12. Allowance of claims 1-12 is therefore requested.

Applicant believes that all of the pending claims should now be in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,

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